

2010

Pesticide Safety 2010 - Weed Management Update

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2010 Weed Management Update

Hilary Sandler

Supported by:

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Dodder Control

- Quinclorac via Section 18
 - Data from WI and NJ
- What happened in 2009?
- What are we doing for 2010?

Quinclorac in WI

- In 2008, Dr. J. Colquhoun reported preliminary data that indicated Q had efficacy vs dodder.
- Lacking alternatives since Kerb was withdrawn.
- No MA experience with Q other than IR-4 trials.

% Dodder Control 2008 WI

Herbicide	Rate (oz/A)	22 DAT	54 DAT
Matrix	2	15.0 c	8.8 c
Matrix+Accent	2 + 0.67	18.8 c	11.3 b
Accent	0.67	6.3 d	0.0 d
Callisto	8	26.3 b	0.0 d
Facet	8 (0.38 # ai)	96.8 a	96.5 a
NIS only	0.25% v:v	0.0 e	0.0 d
UNT	n/a	0.0 e	0.0 d

Applied June 26, 2008 in 30 GPA water.





Quinclorac in MA 2009

- Albaugh Chemical willing to support their quinclorac product, QuinStar.
- Chose 4L for ease of chemigation.
- Received EPA permit June 10, 2009.
- According to MDAR, ~50 gal applied in 2009; ~ 660 A.
 - Most used 8 oz/A = 0.24 lb ai

Why didn't it work?

- We applied the herbicide too late.
- We didn't use high enough dose.
- Liquid not as good as Dry Flowable.
- Different products have different efficacies.
- MA dodder is resistant to Quinclorac.

% Dodder Control NJ 2009

Trmt	Date	Jul 22	Jul 30	Aug 6	Sep 2
QS 4L	Jun 17	70	63	86	100
QS 4L	Jul 22	0	0	37	100
QS 4L 2 app.	6/17 & 7/22	70	67	83	100
UNT	n/a	0	0	86	100

1% COC added; by the last date, dodder senescing naturally. Courtesy B. Majek.

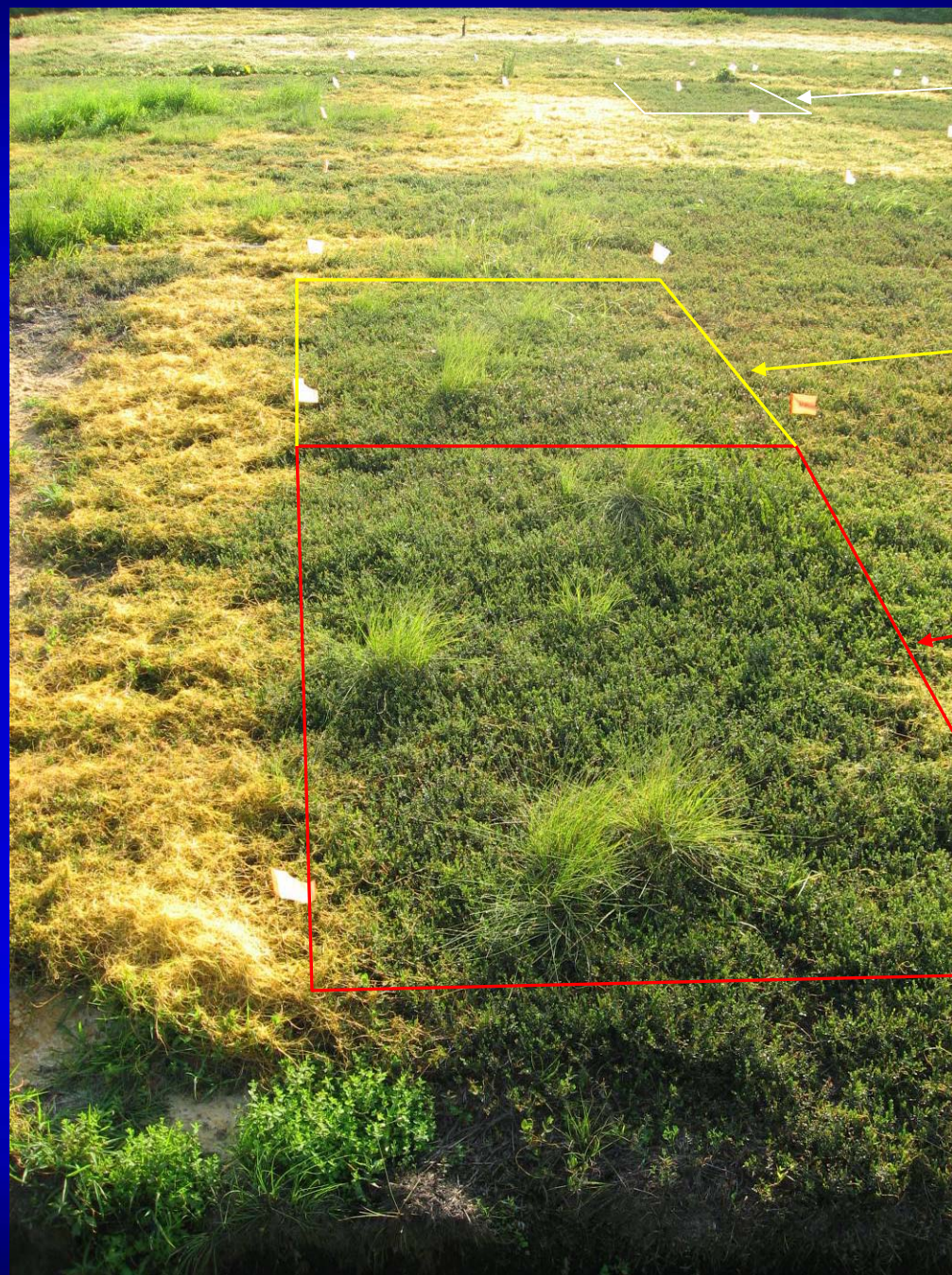
NJ DATA 2009

- Single application did not provide full season control; 2 appl. better.
 - Dodder recovered and bloomed later
- Seed production not evaluated.
- CB have excellent tolerance.
- Only 1 site; however used QS 4L;
 - Earlier appl. was more effective

% Dodder Control WI 2009

Trmt	Jul 1	Jul 23	Aug 25	Oct 22
None sprouted	97 a	95 ab	92 ab	90 ab
Strands present	99 a	98 a	96 a	94 a
Matted, flowers	--	90 bc	84 bc	82 c
Seeds present	--	--	56 d	51 e
UNT	0 d	0 h	0 g	0 g

Facet 75DF, 5.3 oz/A (0.25 lb ai/A) in 30 GPA water. Only selected trts presented.



quinclorac

quinclorac
0.25 lb ai/A

quinclorac
0.38 lb ai/A

What we know now

- Earlier appl. seem more effective.
- Using 8 oz/A QS 4L provides control but 2 applications look better.
 - Must observe 30-day interval
- Permit is requesting 2 applications:
 - 4L: up to 12.5 oz; not to exceed 16 oz.
 - 75DF: up to 8; not to exceed 10.7 oz.

Spring 2010

- Requesting earlier notification from EPA for QS 4L and QS 75DF
 - NIS at 2-4 pt/A when chemigating
- If Casoron works for you, plan to use it.
- Consider using Callisto POST.
- Consider using short-term floods.

Callisto Dodder 2008

- Plots set out at 2 farms.
- Callisto applied before or after dodder was flowering; 5 reps.
- Evaluated for dodder injury, seed production, and cranberry yield
- Repeated study in 2009; data are being processed now.

Dodder Injury Rating

Callisto	15 DAT	49 DAT
4 oz, Jul 10	1.3 a	1.8 a
8 oz, Jul 10	1.6 a	1.6 a
4 oz, 7/10 & 30	1.2 a	1.8 a
8 oz, 7/10 & 30	1.3 a	1.9 a
4 oz AF (7/30)	n/a	1.0 b
8 oz AF (7/30)	n/a	1.0 b
UNT	0.0 b	0.0 c

0= healthy and 4= dead or gone. Values mean of 10 rep (2 farms). 2008 data. Applied to plots at ca. 30 GPA water with NIS 0.25% v:v.

Dodder Seed Production

Callisto	No. Healthy seed (6"ring)	Germination %
4 oz, Jul 10	112 ab	42 a
8 oz, Jul 10	51 b	11 b
4 oz, 7/10 & 30	70 b	31 ab
8 oz, 7/10 & 30	29 b	19 b
4 oz AF (7/30)	73 b	12 b
8 oz AF (7/30)	72 b	16 b
UNT	224 a	48 a

Chemigating with Callisto

- Currently, label reads 0.25% v:v but was developed for other application methods, not chemigation.
- Distributed survey will help me work with Syngenta to get label change.

Survey

- **Which adjuvant did you use?** (List product type and/or name)_____

- **How much PER ACRE?**

None 1 qt 1-2 qt 2-3 qt
 4 qt other

- **Amt Callisto used PER ACRE**_____
- Target weed(s)**_____

- **Were you pleased with the weed control?**
Circle one.

Great job It was good It was ok
It was marginal It didn't work

Survey

- TOP 5 most problematic weeds? Please rank wrt HOW MUCH OF A PROBLEM THEY ARE. Please estimate the % of farm infested with each weed.

- Rank the weed _____ % acreage infested? _____

- ____ Annual grasses _____

- ____ Asters _____

- ____ Chokeberry _____

- ____ Cinquefoil (five-finger) _____

- ____ Dewberry _____

- ____ Dodder _____

- ____ Maples _____

Survey

<u>Rank the weeds</u>	<u>% acreage infested?</u>
<u>5</u> Annual grasses	<u>50%</u>
<u>4</u> Asters	<u>5%</u>
<u> </u> Chokeberry	<u>0%</u>
<u> </u> Cinquefoil (five-finger)	<u>0%</u>
<u>1</u> Dewberry	<u>10%</u>
<u>2</u> Dodder	<u>35%</u>
<u>3</u> Maples	<u>8%</u>

Phragmites

- Clonal, invasive wetlands grass.
- Can grow more than 15' tall; flowers mid-summer.
- Can reproduce by seed, but spreads vegetatively by rhizomes, which can be 6 - 12' long.
 - Can produce 200 stems / m².



Phragmites

- Treat with Roundup mid-summer.
- Mow 4-8 weeks later.
- Repeat yearly as needed.
- Control populations off-site, too.









Rhizome

Pineweed (orangegrass)

- Bushy plant:
wiry, green stems.
 - Small leaves
(less than 1.4")
 - neither a pine nor
a grass;
it's a St. Johnswort.



- Casoron - high rates.
 - Be cautious if using on new plantings.
- Hand pull small patches



Courtesy CT Botanical Society

Purple Loosestrife

- Invasive wetlands plant, 2-4' tall, flowers Jun-Sep.
 - Treat with Roundup.
 - Hand-pull small patches.
 - Control early!!
-
- Not related to Yellow LS.
→



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Richard Old
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Richard Old
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Late Applications of Casoron

- To see if the window of low-rate applications could be extended.
- Injury? Effect on yield??
- BL, ST, EB, and Howes
 - Weekly treatments of 40 or 60 lb/A starting May 10 and ending June 23.

Late Applications of Casoron

- Only 1 year of data.
- Tracking effect on next year's growth and yield.
- Hope to re-do the entire expt to get another year of data.

Injury (yellow vine)

<u>Treatment</u>	<u>Rating</u>
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Week 1	1.4 bc
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Week 2	1.8 a
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Week 3	1.6 ab
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Week 4	1.8 a
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Week 5	1.4 bc
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Week 6	1.1 cd
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Unt	0.7 d
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0 = healthy

3 =
widespread
injury

2009 Casoron trials

<u>Variety</u>	<u>Injury rating</u>
Ben Lear	2.2 a
Howes	1.7 b
Early Black	1.3 c
Stevens	0.7 d

Ben Lear treated with Casoron



Howes treated June 2, 2009 with 40 lb/A

